

SIVISION digital, SIVISION 3

Operating Instructions for the 22" flat-screen monitor REF 63 19 102
REF 63 73 158

English



General information

Dear Customer,

You have decided for equipping your dental treatment center with the integrated communication system **SIVISION digital, SIVISION 3** from Sirona.

You have taken a quite decisive step in the direction of communicating your working results to your patients. You can thus discuss very easily with your patients the status and the success of treatment.

For indeed a picture says more than a thousand words.

Please familiarize yourself with the functions of the flat-screen monitor with the aid of these Operating Instructions.

To prevent personal injury and material damage please also observe the safety information.

Your

Sirona Team



This product bears the CE mark in accordance with the provisions of Council Directive 73/23/EEC of February 19, 1973 concerning low-voltage electrical equipment.

The monitor complies with the following requirements:

- IEC 60950: 2001
- IEC 60601-1-2: 2001




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1 Notes on the present operating instructions

1.1 Identification of the danger levels

To prevent personal injury and material damage, please observe the warning and safety information provided in the present operating instructions. Such information is highlighted as follows:

 DANGER
An imminent danger that could result in serious bodily injury or death.
 WARNING
A possibly dangerous situation that could result in serious bodily injury or death.
 CAUTION
A possibly dangerous situation that could result in slight bodily injury.
ATTENTION
A possibly harmful situation which could lead to damage of the product or an object in its environment.
IMPORTANT
Application instructions and other important information.

Tip: Information on making work easier.

1.2 Formats and symbols used

The symbols and character formats used in the present manual have the following meaning:

<ul style="list-style-type: none"> ✓ Prerequisite 1. First action step 2. Second action step or > Alternative action ↵ Result 	Prompts you to do something.
See "Formats and symbols used [→ 14]"	Identifies a reference to another text passage and specifies its page number.
• List	Designates a list.
"Command/menu item"	Identifies commands, menu items or quotations.

2 Warning and safety information

Intended use	<p>The 22" flat-screen monitor is intended for use on dental units made by Sirona. It serves for viewing intraoral images, X-ray images and any other images resulting from the PC connection.</p>
General safety information	<p>The "on-site installation" must be performed according to our requirements.</p> <p>As manufacturers of dental medical units and in the interest of the operational safety of your system, we stress the importance of having maintenance and repair of this unit performed only by ourselves or by agencies expressly authorized by us. Furthermore, failed components must always be replaced with original spare parts.</p> <p>Modifications to this system which might affect the safety of the system owner, patients or other persons are prohibited by law!</p> <p>Extensive technical documentation is available for service personnel.</p>
Danger of electric shock	<p>To prevent the danger of fire or of electric shock, the product should not be exposed to rain or moisture.</p>
Connected devices	<p>The monitor may be connected only to devices compliant with IEC 60601-1 or IEC 60950 (e.g. PCs). This also applies to the loudspeaker socket. It must not be connected to a stereo system etc. in any case.</p>
Opening the unit	<p>Please do not open or dismantle the product. Danger of injury due to electric shock.</p>
Surfaces	<p>Never touch the glass surface with sharp or hard objects.</p>
Ambient conditions	<p>Do not operate the unit in the following ambient conditions:</p> <ul style="list-style-type: none">• very hot, cold or humid environment• strong development of dust and dirt• in the neighborhood of devices with strong magnetic fields• direct sunlight
Electromagnetic compatibility (EMC)	<p>The SIVISION digital / SIVISION 3 complies with the requirements of IEC 60601-1-2:2001.</p> <p>Medical electrical equipment is subject to special EMC preventive measures. It must be installed and operated in compliance with the specifications provided in the document "Installation requirements" for the respective treatment center.</p> <p>Portable and mobile RF communications equipment may interfere with medical electrical equipment. Therefore, the use of mobile wireless phones in medical office or hospital environments must be prohibited.</p> <p>Image artifacts may possibly occur in the event of electromagnetic disturbances in the vicinity of the flat-screen monitor and/or radio-frequency interference caused by the transmitters of e.g. radio services or radio amateurs.</p>

Disposal

Public legal provisions can contain special regulations regarding the disposal of this system. To prevent environmental damage and personal injuries, we therefore ask you to contact your local dental depot prior to discontinuing the use of this product, with the aim of disposal.

Please also observe the information on disposal provided in the operating instructions for your treatment center.



Attention, observe accompanying documents!

3 Technical description

Model		SIVISION digital / SIVISION 3 monitor
LCD display		21.5" TFT active matrix screen
Display size		475.2 (H) x 267.3 (V) mm
Pixel spacing		0.247 (H) x 0.247 (V) mm
Display mode		EGA 640 x 350
		Text 720 x 400
		VESA 640 x 400 70Hz
		VESA 640 x 480 43-258Hz
		VESA 852 x 480 43-258Hz
		VESA 800 x 600 44-200Hz
		VESA 1024 x 768 45-116Hz
		VESA 1152 x 864 49-105Hz
		VESA 1280 x 1024 49-80Hz
		VESA 1280 x 768 45 - 92 Hz
		VESA 1600 x 1080 50-75Hz
		VESA 1920 x 1080 50-75Hz
		PAL 672x560
		NTSC 680x466
Max. resolution		WUXGA 1920 x 1080 (60/70 Hz)
Contrast ratio		> 350:1
Brightness		typ. 240 Cd/m ²
Display color		16.7 M (RGB, 8 bit)
Perspective	horizontal / vertical	±85° / ±85°
Input signal	S video	RGB analog 0.7V peak-to-peak
	Sync	TTL positive or negative
Signal connection	Analog VGA	15-pin Mini D-Sub
	HDMI	21-pin HDMI connector
	Display port	20-pin display port connector
Control at the front		Soft power switch, Menu, Up, Down, Enter
OSD		Contrast, Brightness, Pixel clock, Phase
		H/V position, Recall, Auto setting, Saturation
		Hue, RGB control, PRESETTING 1/2
		OSD H/V Pos OSD Brightness/Size, Language
Mode of operation		Continuous operation
Operating voltage		12V DC
Nominal current		4A maximum
Operating conditions	Ambient temperature	+10°C – +40°C +50°F – +104°F
	Relative humidity	10% – 90%
	Air pressure	700hPa – 1060hPa
Storage conditions	Temperature	-20°C – +60°C (-4°F – +140°F)
	Relative humidity	10% – 90%
	Air pressure	500hPa – 1060hPa
Dimensions	HxWxD	440mm x 370mm x 63mm
Weight		7.0kg
Protection class		Class I device – No application part
Degree of protection against ingress of water		IPX0
Pixel error rate		according to ISO 13406-2:2001 Class 2
Loudspeakers		2 x 2W

4 Operating and display elements

IMPORTANT

The monitor has two integrated loudspeakers. The loudspeakers are adjusted via the connected PC.



No.	Control	Function
①	Menu	Used to display the OSD menu This key can also be used to go one menu level higher and quit OSD from the main menu.
②	Down	Pressing this key reduces the value of the selected OSD control option. This key also can be used to select ("Down") the OSD control options on the screen.
③	Up	Press this key to increase the value of the selected OSD control option. This key must also be used for selecting the OSD control options on the screen ("Up").
④	Enter	Used to display the OSD menu This key can also be used to go one menu level higher and quit the OSD control options on the screen.
⑤	Ready status indicator	This LED indicates the statuses of the different operating modes of the monitor. Green: an input signal is present at the selected signal source Yellow: for "AUTO" signal input selection: no input signal is present at any input for a permanently set signal source: no input signal is present at the set input Off: the monitor is switched off or no voltage is applied
⑥	ON/OFF switch	For switching the LCD screen on and off

5 Operation

5.1 Using the "On Screen Display" menu (OSD menu)

Different monitor functions can be set using the menu on the display (OSD).

Select of the OSD language

The OSD language can be changed under "System settings – OSD – Language".

Displaying and selecting the OSD functions

Press [Menu] or [Enter] once to call up the OSD main menu.

Select the desired OSD control option with [DOWN] and [UP] and confirm with [Enter].

The OSD menu disappears if no key is pressed for 10 seconds. This setting can be selected in the menu under "System settings – OSD – Display time".

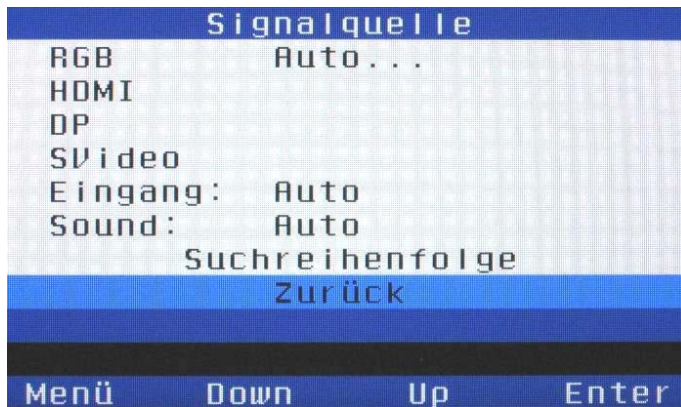
Setting the value of the control options

Change the selected OSD control option using the [DOWN] and [UP] keys and confirm your change with [Enter].

The monitor saves the value settings automatically.



5.2 Selecting the signal input



- Open the main menu with [Menu] or [Enter].
- Open the previously selected menu item "Signal source" by pressing [Enter].
- Select the desired source [DOWN] and [UP] and confirm with [Enter].

INPUT:

This menu item determines whether the signal search is to be performed "manually" or "automatically (auto)".

The order can be adapted accordingly in the "search order" submenu.

RGB PORT

Signal from the PC (PC mode)

HDMI PORT

Signal via HDMI port

Display port (DP) (only for REF 63 19 102)

Signal via display port

S-VIDEO PORT

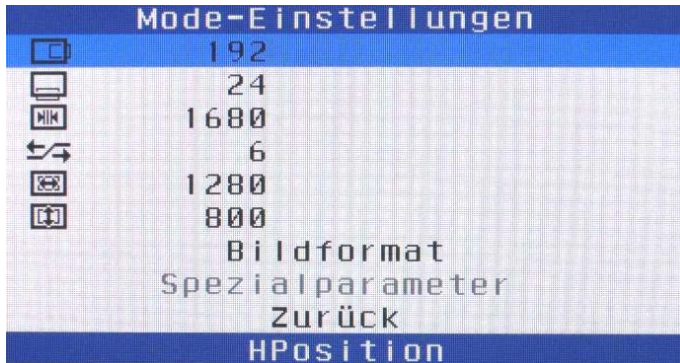
Signal from the video camera (video mode)

Sound:

Change between automatic detection and "Analog audio only".

The setting is saved automatically and also remains stored after the unit is switched off.

5.3 Mode settings



HORIZONTAL IMAGE POSITION

Set the horizontal image position using the [UP] and [DOWN] keys.

VERTICAL IMAGE POSITION

Set the vertical image position using the [UP] and [DOWN] keys.

Scanning (for RGB only)

Set the maximum number of pixels per image line using the [UP] and [DOWN] keys.

Phase adjustment (for RGB only)

Set the phase using the [UP] and [DOWN] keys.

Horizontal image size

Set the horizontal image size using the [UP] and [DOWN] keys.

Vertical image size

Set the vertical image size using the [UP] and [DOWN] keys.

5.3.1 Image format



This menu item is used to change the representational variants of the display.

IMPORTANT

C-line systems:

In the setting "Full Frame: OFF", black bars are displayed to the right and left of the image on the screen, since the input signal of the SIROCAM (aspect ratio 4/3) does not correspond to the aspect ratio of the 22" monitor (16/9).

5.4 Image setting

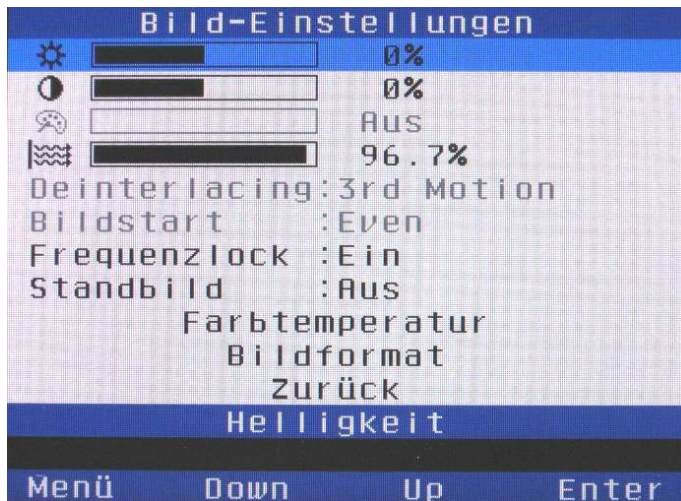


Image settings menu
PC mode only (analog port)



Image settings menu
video mode only (S-Video port)

BRIGHTNESS

Set the brightness using the [UP] and [DOWN] keys.

CONTRAST

Set the contrast using the [UP] and [DOWN] keys.

HUE (S-Video mode only)

This option is used to adapt the color display.

Use the [UP] and [DOWN] keys to change the hue on the LCD monitor in order to obtain an optimal display.

Backlight brightness

Set the backlight brightness using the [UP] and [DOWN] keys.

DEINTERLACING (for S-Video mode only)

This option is used to modify the half-frame display. Possible options include:

Odd: Use only the even image lines

Even: Use only the odd image lines

Half-frame: Alternating odd/even display

Full-frame: Simultaneous odd/even display

3rd motion: Motion-dependent, optimized display

IMAGE START(S-Video mode only)

Deinterlacing with even or odd image lines begins.

Frequency lock

Ensures that the LCD refresh adapts to the frequency of the input signal.

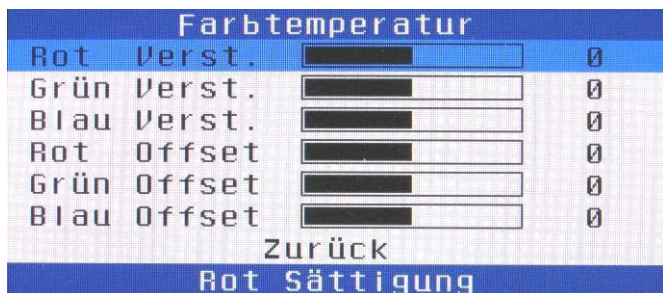
Still image

Shows the currently displayed image as a still image.

Image format

See 5.3.1 Image format

5.4.1 Color temperature (RGB mode only)



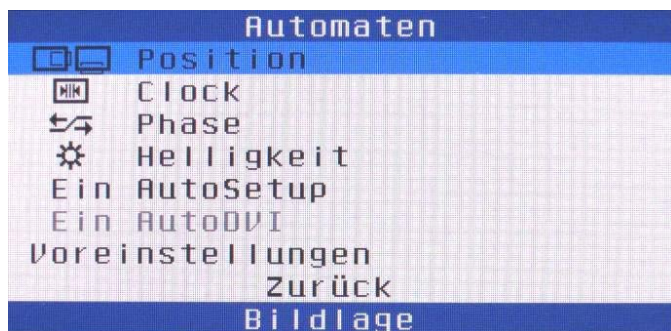
R/G/B gain

Adjust the color contrast in detail using the [UP] and [DOWN] keys.

R/G/B offset

Adjust the color brightness in detail using the [UP] and [DOWN] keys.

5.5 Automatic controls



The following adjustments can be used to set the

- Position
- Clock
- Phase and
- Brightness

automatically.

Auto setup

Switches the automatic image adjustment off or on if a new mode is detected.

Auto DVI

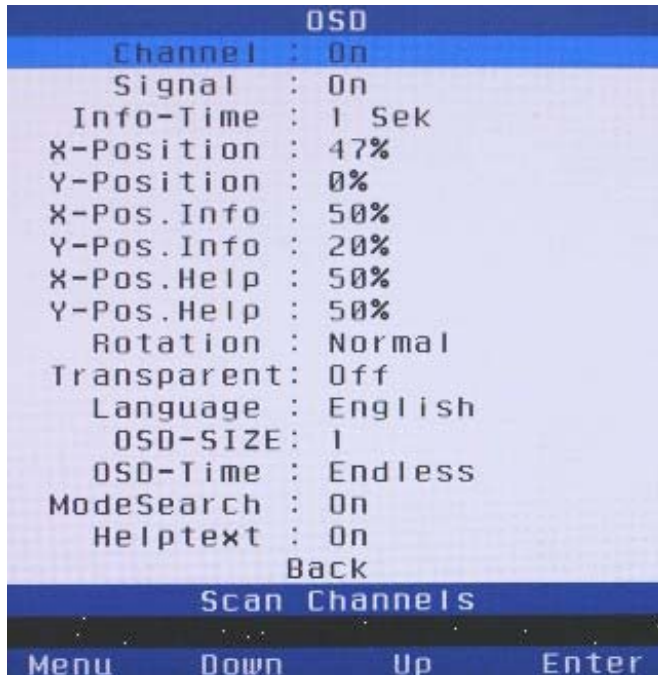
Switches the manual adjustment of the image position on or off with a digital input signal (HDMI, display port).

Default settings

Restarts the mode detection and readjusts the image.

5.6 System settings

5.6.1 OSD menu



The appearance of the OSD menu can be changed with the following settings.

CHANNEL

Switches the display of the active input channel on and off.

SIGNAL

Switches the information line on and off during signal search.

INFO TIME

Set the display time of the info text using the [UP] and [DOWN] keys.

X/y position

Set the position of the OSD menu using the [UP] and [DOWN] keys.

X/y pos. info

Set the position of the information window using the [UP] and [DOWN] keys.

X/y pos. help

Set the position of the help window using the [UP] and [DOWN] keys.

LANGUAGE

This option serves for selecting the OSD language. Two languages are available for the OSD control:

- English and German

OSD SIZE

- Change between the different OSD sizes using the [UP] and [DOWN] keys.

OSD TIME

Set the display duration of the OSD menu if no key is pressed using the [UP] and [DOWN] keys.

Mode search

Switches the signal search on and off when OSD is active.

Helptext

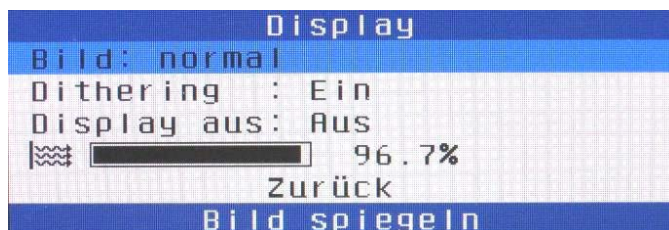
Switches the display of helptexts on and off.

5.6.2 Test images



This menu item is used to adjust different test images, e.g. in order to check the display.

5.6.3 Display



Image

You can mirror the display either horizontally or vertically with this menu item.

Dithering

Switch the display dithering on or off here.

Dithering enables an enhanced color display.

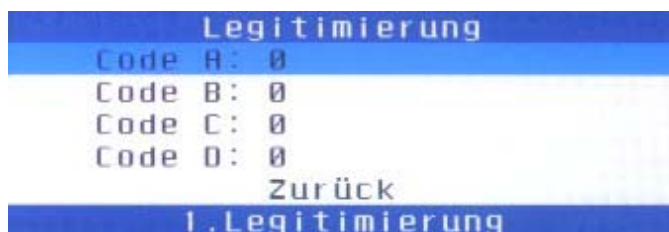
Display off

Set the time after which the display should switch off if no signal can be found here.

Backlight brightness

Set the backlight brightness using the [UP] and [DOWN] keys.

5.6.4 Legitimization



This menu is used only by the service engineer to authenticate and enable additional service menu items

5.7 Channel info

Kanal Info		
	Primärkanal	Sekundärkanal
Einheit:	Analog	-
Eingang:	RGB	-
Ausgang:	Fenster A	Aus
	Messdaten	Messdaten
Status:		
Mode:	1280x800	-
Takt:	83.578MHz	-
V Freq:	60.155Hz	-
H Freq:	49.749kHz	-
Zeilen:	827	-
H Pol:	Neg	-
V Pol:	Neg	-
Signal:	NI/DB/L	-
PDEN:	H0/L0	-
Eintrag:	17 Aktuell	
Zurück		

Displays additional information on the active input signal.

5.8 System info

System Info	
Software nr:	1.0
Seriennr:	1000528871
Betrieb/h:	95
Einschaltv:	1303
VRAM/ROM/REV:	16M/2M/V5.0
Displayname:	LM215WF3-SLC1
Invertername:	GH434A
Zurück	

Displays general information on the system.

6 Care and cleaning

6.1 Care and cleaning agents

ATTENTION

Use only cleaning and care agents which are approved by Sirona!

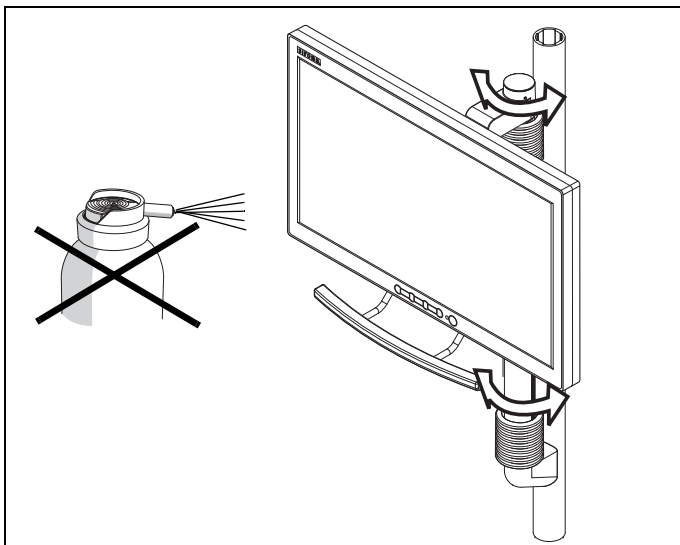
You will find a list of all agents approved at the time of delivery in the documentation folder supplied with your treatment center.

A continuously updated list of approved agents can be downloaded from the Sirona internet homepage under **REF 59 70 905**: ⇨ www.sirona.com

If you do not have Internet access, you can use one of the following two ways to order the list:

- Order from your local dental depot
- Order from Sirona
Tel: ++49 (0) 62 51 / 16-16 16
FAX: ++49 (0) 62 51 / 16-18 18

6.2 Care and cleaning of the monitor



Cleaning

Remove any dirt and disinfectant residues **regularly** using a mild commercial cleaning agent.

Do not use any colored cloths for cleaning, since they may cause discoloration of the surfaces, e.g. in combination with disinfectants!

ATTENTION

Never use corrosive cleaning agents, wax or solvents.

Disinfecting

The glass screen and housing of the monitor can be disinfected by wiping them with a soft cloth.

ATTENTION

Use only cleaning agents which have been approved by Sirona (see above, "Care and cleaning agents")!

ATTENTION

Never spray the monitor with a disinfectant or cleaning agent!

We reserve the right to make any alterations which may be required due to technical improvements.

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